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ABSTRACT

This document is designed to engage workplace educators in thinking about the ideas and issues that the BEST [Better Education Skills Training] team have found to be important in shaping how they conduct their workplace education program. Its format is that of answers to questions that shape program planning and implementation. Students' quotations and teacher narratives are included as illustrations. The section on the changing workplace addresses how workplace changes affect the need for workers' education. The section on program design covers how to design a program to meet the needs of workplace education and how students' needs and choices get put into the curriculum. The section on beliefs and theories addresses the following: one's own beliefs about teaching and learning that influence how and what one teaches, how beliefs about how people read and learn to read influence teaching, Gardner's theory of multiple intelligences, and metacognition and its impact on communication. The section on practices discusses these topics: how to help learners to learn; how to teach the processes of problem-solving, writing, and reading; how the workplace instructor handles diverse needs in the classroom; and the skills identified by the Secretary of Labor's Commission on Achieving Necessary Skills. The final section on the business culture includes what it is helpful to know about the organization, problems in the organizational context, coordination with existing training department efforts, and how to support a culture of learning. Contains an annotated bibliography of 20 selected works on workplace literacy. (YLB)

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Reflections on Workplace Education: Teachers Talking to Teachers

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Supported by a National Workplace Literacy Demonstration Grant from the U.S. Department of Education in the amount of $276,236. The sum is 70 percent of the project costs, cash and in kind contributions from participating businesses and the Chamber of Commerce totaling $118,387. The findings and opinions expressed here do not necessarily reflect the position or policies of the U.S. Department of Education.

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Introduction

In this document we have attempted to reflect on what we believe teachers need to know in order to teach in the workplace. We have discussed the changing workplace, educational philosophy, program design, teaching practices, and the context of the workplace. We actually have structured our writing by forming questions, essential questions which we had to answer for ourselves within the context of planning and implementing our program with several different businesses. Students' quotations and teacher narratives have been included as illustrations.

We are committed in workplace education to helping workers meet the changes that the workplace has made in their lives.

Preface

The purpose of this document is to engage other workplace educators in thinking about the ideas and issues we have found to be important in shaping how we conduct our workplace education program. This document reflects what the B.E.S.T. team has learned in 5 years of conducting workplace literacy programs in Vermont funded by the U.S. Department of Education. In our discussion that follows you will note reflected two unique aspects of adult literacy in Vermont. First, we use a learner-centered approach and are not constrained to use any standardized test. Second, we employ full-time teachers hired for their ability and interest in workplace education.

The B.E.S.T. program teaches SCANS foundation skills in reading, writing, math, communication and problem solving. B.E.S.T. provides comprehensive workplace education programs including need and demand assessment, individual learning plans, custom-designed workshops and classes, and evaluation.

This document is one of a number of staff development and curriculum products to be produced as part of our three year workplace education grant. The products are:

Staff Development Products

• Workplace Literacy: It's Everybody's Business (4 2-hour videos)

Literacy in the Changing Workplace
Learning in the Context of Jobs: SCANS skills
Don't Check Your Brain at the Door: Learning How to Learn
Building a Workplace Education Program: Case Studies

• Reflections on Workplace Education: Teachers Speaking to Teachers (print)

Essays in a Question & Answer Format
Quotations from students and teachers
Annotated Bibliography

• Handbook for Context Driven, Employee-centered Workplace Literacy (print)

• Benefit Study and Model (print)

Curriculum Products

• Communication and Problem Solving Course (print & Responsive Text software)

• Sixteen 4-hour workshop curricula (print)
tentative list of titles:

- Stress Management
- The Challenge of Change
- Working with Difficult People
- Introduction to the Computer as a Learning Tool
- Writing to the Point
- Better Writing with a Word Processor
- Assertive Communication
- Time Management
- Brush-up Spelling
- Study Skills
- Vocabulary Building
- Self-Confidence
- Communicating in Groups
- Vocabulary and Study Skills for HazComm
- Math Concepts for Statistical Process Control
- Problem Solving Tools for TQM

• Building SCANS skills through team learning in the workplace (print & Responsive Text software)

• A Strategies Approach to Prose, Document and Quantitative Literacy (Responsive Text software & Teacher's Guide)
The teaching guide will include:

- essential computer skills and information for installing, managing and using the software
- background on reading theory, psycholinguistics and metacognition as it applies to RT
- learning activities/teaching strategies for building reading skills using RT
- a matrix showing for each strategy:
  - SCANS skills addressed
  - Reading processes developed
  - Types of literacy practiced: prose, document, quantitative
  - Lesson plans utilizing each strategy
- a compendium of lesson plans illustrating application of above teaching activities

The B.E.S.T. Team

B.E.S.T. Staff

Judith Lashof: Director, Workplace Initiatives for the Vermont Institute for Self-Reliance, Rutland, Vermont. Judith forged partnerships with area businesses during her tenure as Regional Coordinator of Adult Basic Education in Southwestern Vermont.

Laura Chase: Instructor/Curriculum developer. Laura spent ten years in business and business education before coming to adult education five years ago . She has also taught at the Community College of Vermont.

Kate Taylor: Instructor/Curriculum Developer. Kate was the director of an independent school and has worked in Adult Basic Education for eleven years. She has taught at the Community College of Vermont, and most recently she was the Homeless Program Instructor/ Curriculum Developer for the Vermont Institute for Self-Reliance in Rutland, Vermont.

Pamela Letourneau Fallon: Instructor/Curriculum Developer. Pam taught in public and private schools for six years before joining the Vermont Institute for Self-Reliance's Workplace Education team in 1993.

Dorothy Ziegler: Instructor. Dorothy has taught with the B.E.S.T program since August of 1993 and is a candidate for a graduate degree in reading.

Judy Palmer: Instructor and liaison with business partners in Brattleboro. Judy has a graduate degree and extensive experience in teaching English as a second language.

B.E.S.T. Consultants:

Alis Headlam, Ph.D.: Assistant Professor, College of St. Joseph's, Rutland, Vermont.

Michael Hillinger, Ph.D.: President, Lexicon Systems, Sharon, Vermont.

Donald Leu, Ph.D.: Professor, School of Education, Syracuse University, Syracuse, New York.

Robert McLaughlin, Ph.D.: Director of Vermont Workplace Education Program, Montpelier, Vermont.

B.E.S.T. Business Partners:

Brattleboro, Vermont

Fleming Oil company, Inc.
Geka Brush Manufacturing Corporation
Northeast Cooperatives

Middlebury, Vermont

Bread Loaf Construction

Rutland, Vermont

General Electric Aircraft Engines
John A. Russell Corporation
Rutland Regional Medical Center
Carris Community of Companies

Marketing Partners:

Addison Career Development Center
Addison County Chamber of Commerce
Brattleboro Area Chamber of Commerce
Rutland Industrial Development Corporation
Rutland Region Chamber of Commerce
Vermont Chamber of Commerce

The Changing Workplace

What is it about the modern workplace that has changed workers' lives?

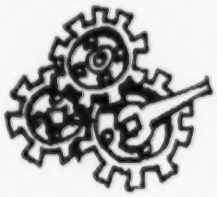
We live in a time of tremendous change. Change is going on in virtually all aspects of our lives. We are faced with massive changes in our global thinking—in the shape of the world map. We are no longer driven to eradicate or contain the Communist threat; we look more to our own population for divisiveness, our own economy for troubleshooting, our own environment for costs and benefits We are having to rethink our priorities in terms of health, welfare, the role of government, the environment, employment, and the quality of life we want for ourselves and for future generations.

The workplace is also an arena for change. According to the U.S.. Department of Education, "An unprecedented interplay of technological, demographic and global economic forces is reshaping the nature of work in America and redefining the American workplace." (Workplace Literacy: Reshaping the American Workforce, p. 3).

History

Let's take a look at workplace change from a historical perspective. In early times, the craftsperson was in charge of materials and processes and had a broad scope of knowledge, a strong technical skill, and pride in work. Quality was high and the worker accountable. Because the basket or the arrow was intended for family or clan use, the item had to be reliable and had to last. So the pre-industrial craftsperson knew the craft and the market intimately. (Harris, p. 22)

With the coming of the Industrial Revolution, the worker lost power. The transformation of raw materials was accomplished no longer at home or by the fire but in a factory, using segmented, complicated processes. The worker and the process became separated and controlled by management and technology and by a market far removed from the worker's world. More external control meant that the worker needed fewer skills. The work was repetitive, not challenging, and required no more than obedience and endurance. Employers saw the worker as a cost, something to be reduced, rather than as an asset.



Today's technology brings with it a need, once again, for great change- change reminiscent of the days of the consummate craftsperson. There is a new interest in quality and in customized work, and the combination of our increasingly sophisticated technology and global competition requires the worker today to take new responsibilities and to have new skills. The new workplace has sophisticated technology, worldwide competition is very much on the minds of producers, and the U.S. economy is seeing a great increase in service and information industries. What workers used to do with their bodies and with machines is now done with computers, robotics, and mechanizers, and many of the remaining low-skilled jobs are shipped overseas. The jobs that remain require workers to do more thinking,calculating, and communicating, and workers used to indifference are expected to associate their own

well-being with that of the company. Front line employees no longer work in isolation. Each one is now a part of a team that is supposed to work together. The high-performance workplace no longer has the rigid hierarchy of the traditional industrial workplace; there is more overlap of roles and duties. Total Quality Management, Continuous Quality Improvement and other high-perfomance workplace programs are re-designing the structure of American business.

Certainly we are very far from a pre-industrial craft age, but many workers today are expected to have the same responsability for quality, knowledge of the whole process of production, and contact with customers as craftsperson did. Multi-skilling requires workers to know several sets of skills and the corresponding technology to produce an expanding variety of products.

Multi-skilled workers have to use reading, writing, and computing more than in the traditional industrial workplace. In teams, more decisions, such as scheduling of work flow and even hiring and firing of staff, are shared. Furthermore, teamwork and increased customer contact require workers to understand and practice effective human relations skills. Workers have to know more about human relations because of their increased experience with customers and team work. Effective communication and joint problem-solving are vital.

So today's workers need to become confident that they can learn new technical, intellectual, and social skills, and they need to learn how to learn better since change is going to keep happening.

> *It used to be you had to know one job. Now you have to know a lot of jobs. I love classes and cross training. I'm learning things I've never learned before. Learning to me is an adventure. I've learned five or six new jobs, which makes me a valuable employee, and I'll have the opportunity to go first shift.*
>
> *G.E. employee*

Problems

Opportunities to learn to do more, to expand one's responsibilities are at the core of this new workplace. The worker who values increased learning and thinking will be well served by the challenge but may also be worn down by the increased stress of doing more and more work. With fewer people employed, do the remaining employees have not just a more challenging job but quantitatively more to do? The Department of Labor statistics indicate that nearly half of America's businesses reduced their work force sometime during the last ten years. Newsweek ("Breaking Point", March 6, 1995) reported, "Today companies routinely ask one employee to do the work of 1.3 people—for the same pay, and with less time off. Overtime is at an all-time high, an average of 4.7 hours a week...while in the last decade the average yearly vacation and other paid absences decreased by 3.5 days." Juliet Schor, an economist from Harvard and author of The Overworked American: The Unexpected Decline of Leisure, believes this trend will continue. On the other hand, workers who are laid off will have more leisure than they want.

Certainly workplace educators will not resolve major societal employment issues but do need to know the cultural context of worker stress in order to design curricula and work effectively with students.

Bob Herbert, writing in the New York Times, Saturday, May 6, 1995, says, "As the ruthless combination of corporate power and conservative politics increases its dominance over American life, legions of faithful and mostly middle-class American employees are tormented by the fear that they will be the next to walk the employment plank. On Monday, the Mobil Corporation announced it would cut the work force at its Fairfax, Virginia, headquarters by one-third, eliminating 1,250 jobs. As soon as the announcement was made, Mobil's stock hit a new high. On Wednesday, the U.S. Energy Department announced it would cut its work force by 27 percent, or 3,788 jobs. The move was seen as an effort by Energy Secretary Hazel O'Leary to ward off Republican calls for the entire department to be abolished....Top corporate executives and rabid conservatives see the forced expulsion of workers from the workplace as a good thing. It is an extremely efficient way to suck money up from the middle classes to the elite....Poll results released Thursday by the Marist Institute for Public Opinion showed that one in three Americans have had trouble meeting their monthly expenses for housing, "and a similar number were financially pressed when medical attention was needed....more than one in four Americans experienced difficulty purchasing clothes that were necessary and one of every six Americans found it difficult to buy food which they needed."

That is a recipe for anger and anxiety. But when the anger is expressed, it is seldom directed toward the corporate elites or the politicians who do their bidding. Downsized and otherwise exploited American workers leave their work stations as humbly and quietly as the ex-football players leave training camp. When it comes time to rage, they find something or someone else to rage at. The most recent figures from the Federal Reserve show that the richest 1 percent of American households have nearly 40 percent of the nation's wealth. The top 20 percent of American households have more than 80 percent of the nation's wealth.

Reprinted with permision, New York Times.

How do workplace changes impact the need for workers' education?

What all this has to do with modern workplace education is this: the skills required for front line jobs for much of the last century are inadequate to meet the needs of the twenty-first century. Many employers are recognizing that workers are no longer just a cost to be borne and hopefully reduced but an asset to be developed in order to add value to the workplace. Failure to train workers appropriately will prolong what is called the "skills gap," leading to defective products, waste of materials, dissatisfied customers, industrial accidents, and low worker morale. Basic skills that were good enough for assembly line production are no longer adequate for workers needing to work with quality control, flexible production, teamwork, and participatory management. Workers fearful of losing jobs need to cross train, to make themselves competitive, to increase their analytical skills so they can better understand their economic and employment situations, and to cope better with stress.

A Quick Overview of How Changes Affect Workplace Education Needs

Since employees are experiencing
the need for new learning on the job
increased responsibilities
fear of lay-offs
longer hours

then they need:

- to know that they can learn
- to learn how they learn best
- to be able solve problems
- to have good basic language and math skills
- to be able to set goals for themselves
- to know how to cope with stress

Since they are experiencing
more need to cooperate with all kinds of people
more need to speak up effectively to supervisors and fellow workers

then they need:

- good communication skills
- assertiveness skills
- listening skills
- effective presentation skills
- effective team building skills
- to appreciate diversity in the workplace

Since employees are experiencing all the above,

then they need:

- an abundance of self-esteem
- optimism

Program Design

How does our view of workers' educational needs influence our view of the teacher's mission?

No matter what skills or concepts we're teaching, we believe it is our mission to help workplace students

- learn to see themselves as successful learners
- learn to give voice to their ideas and needs
- reflect on how it is they learn best and how they might improve their learning
- reflect on their learning barriers and try to alter them
- learn problem-solving processes
- see learning as an enjoyable experience
- become aware of what they need to learn, what they have learned, and what they are learning
- be encouraged by their learning, to view themselves as adventurers, as having the tools to be successful learners
- understand the nature of positive and of negative stress
- have more confidence, initiative, and satisfaction on their jobs

because if they can do all this, they can be successful learners, problem-solvers, and communicators in their workplace—and anyplace else they choose.

Are we allowed under the grant to teach whatever we and the students decide?

The federal workplace literacy grants are not designed to fund vocational or life skills. For example, we cannot teach courses or workshops in resume writing or career decision making or how to help kids with homework or personal budgeting. We cannot teach a specific word processing application. However, in our brush-up classes we might use an employee's need to write a resume or help a child with math homework as contexts in which to teach writing and math skills, and we can teach the use of a word processor as a tool for improving writing; that is, basic functions such as moving text and spell checking and keyboarding are taught as aids to revising and editing.

How did we design a program to meet the needs of workplace education?

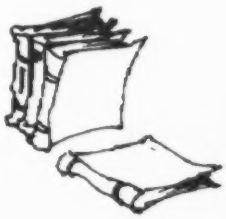
One of our reference points comes from SCANS—the Secretary's Commission on Achieving Necessary Skills, established by the Department of Labor in 1990. The SCANS skills (see page 39) are completely harmonious with our beliefs about adult learners' needs and workplace education needs and at the same time provide us with a "reality check" that we are, in fact, on track.

The B.E.S.T. partners and contractors all embrace the SCANS report on the importance of the three foundation skills....Small group classes focus on the basic skills of reading, writing, mathematics, listening and speaking as they apply to specific workplace tasks and situations. As employees from different work teams interact around workplace problems and concerns in a safe, supportive learning environment, creativity, problem solving, decision making, visualization and reasoning also are fostered along with sociability and integrity/honesty. The development and implementation of individual learning plans which identify strengths and set goals promote self-management, self-esteem and responsibility. The design of all short (i.e. 4 hour) workshops, whatever the topic, will emphasize problem solving, creativity, visualization, reasoning, decision making, self-management, self-esteem, and responsibility. The Responsive Text software developed by LexIcon (a contractor) and the accompanying learning activities...will involve participants in applying the SCANS thinking skills to workplace material on health and safety, statistical process control and communication and team skills.

Judith, B.E.S.T. staff

Next, we are aware of the work done in 1992 by the National Adult Literacy Survey in response to a U.S. Department of Education order to study adult literacy. The study pointed out the importance of prose, document and quantitative literacy and the difficulties many adults in this country have in performing at functional levels. We have used these literacies as references for our teaching:

Prose literacy: the knowledge and skills needed to understand and use information from texts that include editorials, news stories, poems, and fiction; for example, finding a piece of information in a newspaper article, interpreting instructions from a warranty, inferring a theme from a poem, or contrasting views expressed in an editorial.



Document literacy: The knowledge and skills required to locate and use information contained in materials that include job applications, payroll forms, transportation schedules, maps, tables, and graphs, for example, locating a particular intersection on a street map, using a schedule to choose the appropriate bus, or entering information on an application form.

Quantitative literacy: The knowledge and skills required to apply arithmetic operations, either alone or sequentially, using numbers embedded in printed materials; for example, balancing a checkbook, filling out an order form, or determining the amount of interest from a loan advertisement.(Adult Literacy in America, 1992,1-13)

But most important in our program design, we ask the students what they want/need to learn.

Why are the students so important in our program?

First, they know their needs. Second, as we said above, it is our understanding that the modern workplace requires workers who are confident learners, thinkers, initiators, and problem-solvers, and it is our commitment as teachers to encourage our students to see themselves in those ways. Therefore, we treat students as collaborators in their (our) learning so they will be prepared for any new challenges on the job.

Since students are so important in our program, how do their needs and choices get put into the curriculum?

At each participating business an employee education committee meets with B.E.S.T. representatives to talk about education needs and interests. A survey is prepared by this group to be given to employees on the job, identifying categories of learning in order to get from all the employees information about their educational needs and desires. Employees are invited to indicate learning interests even in areas that B.E.S.T. cannot accommodate them, thereby identifying them for management's attention. In some cases B.E.S.T. can provide referrals to other educational resources.

These surveys introduce the employees to the possibilities of the new workplace education program. After the surveys are returned, the B.E.S.T. staff visits with every employee to:

- relate the survey information to department specific needs,
- identify factors indicating the need for education,
- gather suggestions for the effective delivery of education,
- assure employees that the B.E.S.T. program will be responsive to their needs and deliver education without grades, tests, or competitive pressure,
- convey to employees that the central goal of the assessment is to develop a long term educational plan thoroughly informed and approved by the employees themselves, and
- increase the survey response rate.

Recently, we have made our visits with employees very brief one-on-one interviews. We are finding that this is far more effective in capturing the employees' attention and overcoming employee fears than other approaches we have used, especially at manufacturers. However, the method of the visits must be adapted to each workplace. For example, at a hospital and a construction firm we met with employees in groups by department and worksite respectively. At other employment sites we were able to chat with almost every employee while touring their work facilities.

In making these visits we ask questions such as the following:

1. What are the skills a person, say a new employee, needs to do this job effectively?
2. Are there any new skills and knowledge that would help you improve or advance in your job?
3. Are there any ways education could improve the quality of your work life—make it saner, safer, easier, less stressful, more satisfying?
4. Are there any changes (recent or anticipated) in policies, technology or work organization that increase the need for education?

The information from these interviews is taken down without names attached except that in private interviews we ask: Do you want me to take down your name and notify you when the classes start?

Once the interviews are complete, the B.E.S.T. staff discusses with the employee education committee the themes and issues that emerged from the interviews. Together the committee and B.E.S.T. staff develop recommendations for the implementation of programming. From this, the B.E.S.T. staff produce a report to management of the process, findings and recommendations of the need and demand assessment which is endorsed by the employee education committee.

Included on the next page is a copy of a survey made up by one employee education committee and the B.E.S.T. staff. About 100 (25%) of the employees returned the survey they received in their paychecks. Subsequent interviews doubled that figure.

The interviews were during working hours and in the working context of each worker. The workers could actually show me the skills and knowledge someone in their position needs. They offered specific and concrete examples of what they do on the job. Some examples of the different environments I interviewed at were warehouses, convenience stores, offices (different departments), manufacturing plants, etc. Sometimes it was hard to conduct these interviews, because of the noise level and distractions that occurred, but the workers were quite patient and willing to be interviewed. I expected it to be awkward, and it really wasn't.

Keeping in mind that each workplace is different and each worker at each site is different, I needed to adapt my approach in asking questions and be spontaneous, yet, be prepared to answer the various questions that arose from different workers, different departments, and different workplaces.

When conducting interviews with workers, I found that I was consistently monitoring my language to be sensitive to and respectful of all workers, Adapting your language from a serious interview type fashion into something more empathetic and personable can be less intimidating to workers with fears. Certain levels of vocabulary can be alienating and intimidating. This is definitely not the case for all workers, but I found that using simple and clear language was much more effective with the workers I interviewed.

And talking down to people will be the first thing that will turn them away. Actually, the same is true for children, and these adults were once children. Maybe talking down to them when they were children is part of the problem they have now with teachers. You have to strike just the right balance. Be clear. Respect the dignity of the other person. Isn't that the way we want to be talked to?

Judy, B.E.S.T. staff

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B.E.S.T. EMPLOYEE EDUCATION SURVEY

Your input is the key to making the new B.E.S.T. program OUR program! Please return your survey by May 3, 95 to your supervisor, Mary or the B.E.S.T. Employee Education Committee Members listed here: [list removed]

PLEASE CHECK ALL OF THE TOPICS THAT INTEREST YOU.
DO NOT SIGN YOUR NAME.

72 **COMMUNICATION COURSE** (3 hours per week for 10 weeks)
Increase your ability to communicate with co-workers, family, and friends. Understand and practice the communication process. Learn strategies for solving problems and overcoming barriers to communication.

58 **BRUSH-UP LAB** (2 hours per week for 10 weeks)
Those who choose to join a brush-up class will begin with a private confidential meeting with the teacher to develop a learning plan which meets their individual needs. Check the areas in which you would like to brush-up your skills.

17 Writing	14 Reading	17 Reading Comprehension	25 Spelling
6 GED prep.	15 Study Skills	15 Learning Strategies	13 Vocabulary
17 Grammar	22 Math		

40 **HOBBIES** (after hours)

22 Photography	3 Book Club Discussion Groups	__Other (Specify)

68 **COLLEGE PROGRAMS**

11 Animal Science	11 Sports Therapy	23 Accounting	8 Study Skills
20 Psychology	9 Nursing	0 Calculus	5 History
46 Business Management			

19 **TECHNICAL & OFFICE**

19 Automotive Electronics	21 How to Grade Wood	24 Welding	34 Electrician
13 Drafting	20 Spread sheets	11 Phone Skills	23 Bookkeeping
		18 Forest ProductS	

RETURN BY MAY 3, 1995

OVER

B.E.S.T. WORKSHOPS

(1 hour per week for four weeks)

38 Assertiveness (How to ask for what you want without feeling guilty.)
31 Better Writing with a Word Processor (How to use a computer with the writing process.)
39 Coping with Stress (Understand the stress in your life and learn to relax.)
32 Do You Forget? (Exercise your memory)
27 Effective Groups (Goal Setting, Decision Making, Cohesion, and Communication.)
5 Handling Conflict (How to resolve conflict without running or fighting.)
21 How to Talk in Front of People (How to speak up in a group.)
17 Making Decisions in Groups (How to make decisions together.)
30 Problem Solving & Decision Making (Have fun learning steps to success.)
17 Reading Comprehension (Strategies to help you understand and remember what you read.)
19 Reading Difficult Material (More efficient reading techniques and strategies.)
27 Self-Confidence (Identify your strengths and feel good about yourself.)
17 Shop Math I (use of calculator, problem solving, decimals, fractions, tape measures)
12 Shop Math II (ratio and proportion, percents, metrics)
16 Spelling Brush-Up (Why spelling is hard and what you can do to spell better.)
14 Study Skills & Test Taking (How to learn from textbooks and lectures, and handle tests.)
21 Coping with Change (Strategies for coping with a changing workplace.)
35 Computer as a Learning Tool (For first time computer users.)
30 Time Management (Set priorities, reduce interruptions and get done what you need to do.)
42 Working with Difficult People (Types of difficult people and how to handle them.)
19 Write to the Point (More effective memos, letters and reports.)

___Other (Specify:_____)

I prefer to attend classes

____ during 1st shift	____ after 1st shift
____ during 2nd shift	____ after 2nd shift
____ during 3rd shift	____ after 3rd shift

Your input is the key to making the new B.E.S.T. program OUR program! Please return by May 3rd.

If you want someone to talk with you about B.E.S.T. please call Mary or put your name here.

In another business, after using a course list for a while, our business liaison requested that B.E.S.T. redefine course offerings, asking for skill listings instead of courses. This was the form that resulted.

Our Pledge is to return to you an individualized plan of action.

We've heard it from Town Meeting, community businesses and others: our Jobs are changing. The teams in Administration, Human Resources, Education and B.E.S.T. are working to provide you with information which will make this change as smooth as possible in the most non-threatening way.

One way to prepare for this challenge is to evaluate yourself. Please take a moment to look these over. If you wish, explore this with a friend or your supervisor. Select those skills which you would like to explore.

- ☐ Understanding words and phrases
- ☐ Reading and understanding long articles, instructions, books
- ☐ Understanding medical terms
- ☐ Evaluating content of reports and memos
- ☐ Filling out forms
- ☐ Writing memos and other documents
- ☐ Swaying people to your point of view
- ☐ Using basic math skills
- ☐ Using tables, graphs, charts
- ☐ Using formulas, ratios, proportions, probability
- ☐ Understanding simple spoken directions
- ☐ Becoming a better listener
- ☐ Speaking clearly so I can make my point
- ☐ Speaking up in group discussions/meetings
- ☐ Becoming more creative
- ☐ Making decisions
- ☐ Setting goals
- ☐ Solving problems
- ☐ Visualizing information
- ☐ Increasing self confidence
- ☐ Increasing flexibility
- ☐ Knowing how I learn and remember
- ☐ Using logic
- ☐ Teaching others new skills
- ☐ Other _____

Development of a Course in Interpersonal Communication and Problem Solving

In 1993 as we began to work with the employee education committee it became clear that some form of communication skills course was needed. Out of 297 responses to an initial employee education survey 66 people or 22% expressed interest in communication skills. As we collected more information, talking to people about specific needs and researching the subject, we realized we needed to offer this as a ten-week course rather than a four-week workshop. We decided to include communicating with difficult people, collaborative problem solving, and effective meetings in the curriculum. Also, students could choose optional topics: giving and receiving directions, gender issues in communicating, communicating with supervisors, and leadership. We submitted a proposed outline of the course to the employee education committee who were very helpful giving constructive feedback and adding new ideas. At another worksite a similar procedure was followed but it was decided to run the class as a series of four-hour workshop since students there were unable to get away for ten classes.

In this class students spend quite a bit of time working on problem solving, especially problems brought in from their own work situations. We used one problem as a group exercise to demonstrate various problem solving methods, and the class spent two entire sessions working on the problem. The student was able to take the information he had learned in class back to his work area and was successful in meeting with his supervisor to begin to solve the problem. Several of my female students have been able to confront their supervisors when they felt the supervisor had made inappropriate comments, and students have challenged supervisors when they were asked to do things they didn't think were right. Several students were able to be more assertive with co-workers and supervisors, and I have watched very reserved students gain confidence and become active members of the class as the course progressed. Another student was able to successfully ask questions and communicate with a utility company about his bill.

I've watched student attitudes change as they learned to listen to others and respond appropriately. Above all, the communications course has empowered the students to take more control in their lives both in their work world and the world beyond.

Laura, B.E.S.T. staff.

Do our students come to our program because they're required to?

Mostly no. In almost all cases, the students in our program participate voluntarily, and their companies do not mandate any particular course for them. Student level and achievement are confidential; we do not share this information with the employer. Therefore, the curriculum, the underlying philosophy, the materials, methods, and evaluations are the responsibility of the workplace staff, assisted by their consultants, and the students are principal players in choosing what and how they learn.

There are a few instances of employer-mandated programs. Because of federal regulations, hospital employees must have training in blood-borne pathogens

and construction workers in the safe handling of hazardous materials (HazComm). We have taken these technical topics and integrated them with literacy instruction so that we could reach groups of employees with literacy training while increasing the effectiveness of the required technical training.

Sometimes work teams are required to participate together. In a local manufacturing company B.E.S.T workshops such as Dealing with Difficult People, Stress Management, and the Challenge of Change had promoted discussions about the need for collaboration. Hearing this need for team-building, B.E.S.T. offered to facilitate team-building workshops, and the company responded by mandating the workshops for entire work teams.

It seems that each team-building workshop will fall out a little differently. The first one was very successful because although we had pulled together a curriculum to help this work team to develop team-building skills, we actually ended up incorporating into the workshop, some of the tools for total quality management. Once we started problem solving around the various processes, the team realized that more team-building needed to be done. Then we worked on developing a workshop to bring representatives together from each shift in that department, so that the quality improvement process could move forward with every one speaking the same language. The second team-building workshop had more of an interpersonal communication slant, with discussion and communication strategies focusing on how to deal with difficult people.

Each time before beginning the workshop, I met with the department heads. We discussed what goals they had in mind when they volunteered their natural work teams for a team building workshop. We talked about various processes they had in place for team building or problem solving. Then I went out into the selected department to meet each of the employees who would be participating in the workshop. I introduced myself, our program—for those employees who were not very familiar with it—and then talked a little bit about the upcoming workshop and handed them a written invitation. I told them their department head's goals and asked them if there were other topics they might like to see addressed. I asked them if they felt their team was effective now, and if not, what could be done to improve it.. All of these comments I wrote down, in full view of the interviewee, probing deeper here and there for understanding a particular comment or dynamic..

During the first session in the team building workshop, we opened with several icebreakers; then a group brainstorm added goals and objectives to the ones already mentioned from my informal interviews. I brought refreshments and an eager ear. We had a lot of fun, talked about some serious issues, solved some problems, while creating others. In the last session together, I asked for feedback on the time, four hours in all, that we had spent together. The most frustrating part about the feedback was that although every participant believed that the workshop provided them with valuable information and processes, in the long term they felt the team atmosphere would not be able to survive in this company's competitive culture.

Pamela, B.E.S.T. staff

Beliefs and Theories

What are our own beliefs about teaching and learning that influence how and what we teach?

It happens, happily, that our belief that workplace learners need to become active, confident self-knowing learners is supported by our beliefs about adult learning generally. We believe that students already know a great deal about successful learning, that they also bring with them and can reflect on past experiences which may be aids or barriers to learning, and that they can come up with some new awarenesses of how best they can learn. It seems to us that adult learners can expand their understanding of their learning by being encouraged to make connections between what they already know and new knowledge and that rote work without connections is meaningless and therefore ineffective. We also believe that learners are capable of thinking about their own learning preferences and practices, in terms of what works and what impedes and what might be better or, at least, worth trying, and that they come with their own mixture of intelligences (see discussion that follows on Multiple Intelligences). We encourage students to attach new learning to what they already know, believing in the power of connection. (see discussion that follows on Making Connections). And we know that we as workplace teachers learn about learning from our students.

Accordingly, we value collaborating with the learner in setting goals, choosing materials and methods, and in evaluating learning. We adapt materials and procedures according to what we sense is appropriate for the students we're working with. In the brush-up classes in basic skill areas such as math, reading, writing, writing on the word processor, students create their own goals and work either individually or in small groups, using materials from the workplace and from their own interests. A lot of work proceeds from the students' questions. Lesson plans are abandoned or modified accordingly. "That's not exactly what I intended to teach, but wasn't that interesting!" is a typical teacher report.

In individualized learning, in group workshops (2-4 hours), and longer classes (10-20 hours) we believe it is important to be alert to student questions, initiative, need, fear, interest, response, and learning styles, encouraging students to consider how it is they are learning when they are--and what may be the matter, what may be alternative methods, when they're not, so that students learn to learn, to take responsibility for their learning, and to view themselves as learners. We don't give grades or sort students or work as to grade-level. We don't give homework assignments except when the student requests them.

We also believe that learning together can be enjoyable. Excitement and humor are essential partners in our teaching. From this discussion, it is probably clear that we do not rely only on a set of materials, a certain method, a job-task analysis, or outside authority to direct our teaching.

Judy Palmer, B.E.S.T. teacher in Brattleboro, likes the energy of discovery and collaboration in her Total Quality Management class.

"What is TQM? Is it the same as CQI?"
"Everybody keeps talking about TQM at work, and I still don't know what they're talking about."
"Maybe if I take the TQM workshop that is being offered by the B.E.S.T. program I will have a better idea what all of this is about and how it relates to my job at Northeast Cooperatives."

These are the various questions and statements that I continually heard before workers participated in the «Problem Solving Analysis Tools for TQM Workshop.» Everybody wants to know what this is and how the changeover to TQM will affect their company, their departments, and their individual jobs.

Session 1.

So how can a B.E.S.T. instructor begin a course such as this? Well, let's find out what the workers already know, or what their current thoughts are about what TQM is. Let's ask some basic questions and generate answers from the learners.

What is Quality?
What is TQM?
Why is quality so important?
Why is quality more important today than 10 years ago?

As the students brainstorm and offer answers to these questions, I record them on newsprint to later compare the students' ideas and thoughts with what the creators of TQM say about TQM principles and strategies.. Here are some of the answers students have generated:

What is Quality?
"Excellence."
"Something that works as well as it can for what it was meant to."
"Something that lasts a long time."
"Customer satisfaction."
"Quality workers."

What is TQM?

"A holistic system."
"Worker attitude."
"Team work."
"Not always a person that causes the problem because all gears are grinding together."
"Communication."

A comment was made to one worker who was leaving work on her way to attend the first session of this workshop,

"Why are you going? You're not a manager."

Why is quality so important?

"Global market."
"Competition with other distributors."
"Workplaces are changing. individuals have to have more versatile skills—you have to be an octopus!"

What's more important is for learners to understand how TQM principles/strategies and the Tools for TQM can be applied to their workplace and their individual jobs. So, from here, the students work in groups reflecting on and discussing the current processes at their company. A worksheet with specific questions called «Quality In Your Organization» is the form each group follows doing this group activity.

As a B.E.S.T. instructor, I am constantly amazed by the discussion that gets stimulated within the groups from these questions. Some comments:

"Wow, this is great for cross-training. I never knew you did that in the purchasing department; now I understand why we are having a problem with some of our pre-orders."
"I never thought about doing the right things wrong, doing the wrong things right, or doing the wrong things wrong at work or in general before, uh."
"If we ran the place, we would focus on manager accountability, worker accountability and promote greater cross-training."

The next stage of this process is to generate some discussion of current processes at the students' workplace that are causing problems. Again, we record these on newsprint so we can later decide which process makes the most sense to work with throughout the duration of the workshop sessions.

Now I introduce the concept and the purpose for a check sheet as one of the Tools for Total Quality Management. A check sheet can help monitor and measure the frequency of a given problem within a process which arises over a certain period of time. One student said, "Wow, we'll actually have some authentic data to work with."

In groups, learners create their own check sheet with problems that are occurring within a given process. Throughout the four-week workshop the students are required to keep track of how often a problem arises within the overall process. This data will be used for other activities in the workshop that involve graphing to determine quality control and ultimately to improve quality the current process.

Session II.

Now is the time for us to explore the Responsive Text Software that will help to teach the concepts and the tools for Total Quality Management. Students get very excited when the program gives them interactive activities to allow them to practice what they are learning.

"Ooh, I got it right; this is great!"
"Wait a minute; I'm confused." So, I'm there to help explain concepts and computer functions.
"Interesting. This is beginning to make more sense."
"Wow, this is cool!"
"Uh, I can really see how we could use some of these tools where I work."

Ideally, students work in pairs doing the Responsive Text computer program so that they create a dialogue while they are learning. In doing this, they end up teaching each other. Learners also have a printout of the Responsive Text so that they can refer to it as they are working on the program and later when questions arise concerning what they have learned. No one can retain this much information in one or two sittings.

Session III.

After students have gotten through the first module of the Responsive Text program for TQM, they work in groups. Each group has a different task:
Procedures:

a. Using the current process the students have been using to indicate the problems that occur most frequently on their check sheets, one group of students creates a fish bone diagram that shows cause and effect. Students create this on a big piece of newsprint with magic markers. (The second group works on the first stage of the PDAC (Plan- Do- Assess- Change) cycle—the planning stage.

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They use a blank PDAC chart to record their planning ideas. A big piece of newsprint is good for this.)

b. Two spokespeople from each group explain their diagrams.

Note: It is important to mix the groups with representatives from different departments. It is great to listen in when the students are creating their diagrams and brainstorming ideas and solutions. Here are some comments I have heard.

> *"Oh my, could it actually be that our fish has so many fins!"*
> *"Wait a minute; that's not the cause, that's the effect."*
> *"Goodness, this isn't as easy as I thought it was going to be."*
> *"Doing this with workers from different departments is helping me to understand the whole process. I never realized how many complex processes there were within the simple process."*
> *"I'm glad we've had the chance to get off of the computer and really talk about how all of this stuff relates to our workplace."*
> *"The Responsive Text program is great, but we also have to share and talk about what we learn from it with each other. I'm really glad we have had the opportunity to do this."*
> *"Wow, our fish has two heads."*

Session IV.

During session four the students start or complete TQM 3.0 on the Responsive Text program. After everyone has finished, as a group, we begin working on the DO stage of the PDAC cycle—mapping out a trial run for the new process.

Comments:

> *"Wow, wouldn't it be great if we could really take what we have learned here and share it with management and the rest of the workers at our workplace."*

So I say, "Why don't you?" This is one of the primary principles of TQM—empowering the workers to be part of the whole process-to feel valued and respected as part of a team.

So the individual who said to one of my students,
"Why are you taking this workshop? You're not a manager,"—he's got it all wrong!

How do our beliefs about how people read and how people learn to read influence our teaching?

Here is an exercise developed by one of our consultants, Donald J. Leu, PhD.(1995, p.45-56) from Syracuse University to help teachers assess their beliefs, their explanations about how people read.

If you would like to try it, first read and follow the directions for Figure 1 on the following page.

Second, decide how you would label each item you chose in Figure 1 as "text-based", "interactive", and "reader-based" according to the following model which shows explanations about how a person reads:

Reader-Based Explanations	Interactive Explanations	Text-based explanations
Prior knowledge components are important	All components are important	Decoding is the most important component

Third calculate your score along the horizontal line of the scoring grid, p. 34

Now if you would like to assess your beliefs, explanations about how people learn to read, refer to the items in Figure 2. Follow the directions. Then decide how you would label each item you chose in Figure 2 according to the following model:

Specific Skills Explanations	Integrated Explanations	Holistic Explanations
Explicit instruction by teacher of discrete, specific skills	Purposeful, holistic experinces plus instruction in specific skills	Inductive, holistic experiences

Then calculate your score and mark the vertical line on the scoring grid, p.26

Figure 1
Beliefs about how one reads

Directions: Circle the numbers of the five statements that you agree with most.

1. When participants cannot recognize a word during reading, a useful strategy is to help them try to sound it out.

2. Participant's knowledge about the world is more important during reading than their ability to correctly sound out words.

3. To understand what they read, it is important that participants be able to read most words correctly.

4. Before participants read about something unfamiliar, it is helpful for them to have an experience similar to that depicted in the reading passage.

5. When we ask participants a question about a story they have read, usually there is one answer that is better than others.

6. When participants cannot recognize a word during reading, a useful strategy for them is to read the sentence again, look at the first letter of the difficult word, and make a guess.

7. Teachers should spend roughly equal amounts of time showing participants how to sound out unfamiliar words and how to make reasonable guesses about unfamiliar words.

8. Reading is really the interaction betwen what an author intended to mean and the meaning a reader brings to that text.

9. Teachers should encourage each person to have a different interpretation and response to a story.

10. When we think about comprehension, it is important to keep in mind that the meaning an author intended is usually what we should encourage participants to take away from their reading experience.

11. Teachers should always find out what participants know about the topic of a story before asking them to begin reading.

12. Generally speaking, there is usually one interpretation of a story that the reader and writer both share.

13. During the reading process, guesses are often as important as accurate recognition of words.

14. Authors and readers understand a story in their own ways.

15. When participants cannot recognize a word, a useful strategy for them is to read the sentence again and make a guess.

Figure 2
Beliefs about how students learn to read

Directions: Circle the numbers of the five statements that you agree with most.

1. It is important for teachers to provide clear explanations about important aspects of reading.

2. Participants should be encouraged to select and read materials unrelated to classroom learning tasks.

3. Reading instruction should include both teacher-directed and student-directed learning tasks.

4. Adults learn the most about reading when they engage in reading experiences that are personally meaningful, accomplish an important function, and are self-directed.

5. An effective reading program is one where both participants and teachers have a clear understanding of the important aspects of reading that need to be learned.

6. Reading assessment should match closely the skills that have been developed in class.

7. Some participants seem to learn about reading best when they determine their own literacy experiences; others seem to learn best through more structured experiences designed by a teacher.

8. It is important for adult learners to select their own materials for literacy lessons.

9. Teachers should create literacy experiences that are personally meaningful to participants and provide them with authentic reasons to read and write.

10. Teachers need to regularly consider which participants will benefit from more student-directed literacy experiences and which participants will benefit from more teacher-directed literacy experiences.

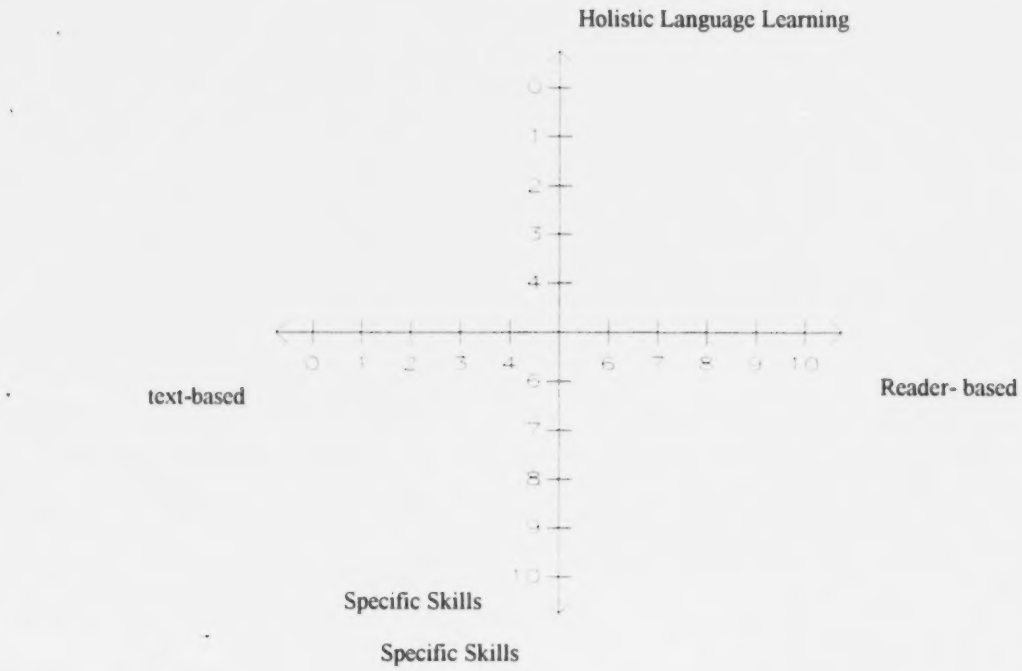
11. Teachers should have a minimal list of literacy learning goals for each participant to accomplish during the program.

12. Much of what participants learn about literacy can be attributed directly to what a teacher has taught.

13. Both participants and teachers should be allowed to define the nature of literacy learning in classrooms.

14. Participants learn much about literacy by watching peers engaged in literacy activities.

15. No single approach to literacy learning will fit each person perfectly. Teachers need to modify their program to meet each person's unique needs.



Determine your beliefs about reading

Directions:

Calculate the mean score for your belief about how one reads in the following fashion. Assign 0 points to every text-based statement in the inventory. Assign 5 points to each interactive statement. Assign 10 points to every reader-based statement. Now add all of your points to calculate a total score. Divide this total score by 5 to arrive at the mean (average) score for your beliefs about how one reads. Mark this value on the horizontal line at the correct point.

Calculate the mean score for your beliefs about how one learns to read in the following fashion. Assign 0 points to every holistic statement in the inventory. Assign 5 points to each integrated statement. Assign 10 points to every specific skills statement. Now add all of your points to calculate a total score. Divide this total score by 5 to arrive at the mean (average) score for your beliefs about how one reads. Mark this value at the vertical line at the correct point.

The combination of your beliefs can be plotted by the intersection of the two points on these two lines.

We found in doing these exercises about reading that we clarified for ourselves our general approach to instruction. We each scored at the intersection or in the direction of "interactive" and "integrated" explanations. This made sense to us as we realized that we are characteristically "gatherers" — of texts, student experiences, needs, and interest, and our own experiences and insights. This does not mean that we believe every good teacher has to score the way we did. Our consultant, Don Leu, explains, "Every teacher has his/her own beliefs that we must validate and respect. Each teacher travels along a journey toward developing his/her own insightful teaching." The exercises here simply help teachers see where they are at a given moment.

What is Howard Gardner's theory of Multiple Intelligence and how might this theory impact your teaching and learning?

There are many different theories that we have discovered in our research and course work in preparing this study guide. These theories have engaged us in our own learning and teaching in new and exciting ways. One such theory is Howard Gardner's theory of multiple intelligences.

Much has been written about standardized tests in general and IQ tests specifically. Howard Gardner, from Project Zero based out of Harvard University, fashioned a model of looking and thinking about intelligence that respects individual differences in looking at how people make sense of their world.

In respecting individual cognitive differences, Gardner attempted to challenge our common perceptions about intelligence and human potential.

Traditionally people were limited in terms of their potential by how they scored on an IQ test. Gardner classified intelligence into seven main categories although he contended that a case could be made for many, many more. Briefly they include: Linguistic: the ability to use words; Spatial: the ability to perceive space; Body-kinesthetic: using one's body to express ideas and feelings; Mathematical: the capacity to use numbers and reason; Interpersonal: the ability to perceive and make distinctions in the moods, intentions, motivations, and feelings of other people; Intrapersonal: self-knowledge; and Musical: the capacity to express musical forms. Gardner's theory is very helpful in that he believes that all of the seven intelligences exist simultaneously in everyone even though we each have two to three dominant ones. We can utilize our strengths and strengthen our weaknesses.

What have you learned in the BEST program about how you learn and solve problems?

"I learned that we all learn differently. Some of us are visual learners; some of us learn best by hearing or doing."

"I like listening to different people now, so I can see how they look at things."

"You need to not be embarrassed about using your resources."

" Noise distracts me; I can't concentrate when I try to work in a group."

"Now I do a lot of skimming because that tells me what I'm doing or what I'll be reading."

"My brain still tells me that I can't do something, but now I try it anyway because I know that I really can."

" I'm more self confident, I don't always think that it means I have more influence over the things that affect me at work, but I have more influence in my learning. Now I know where to go."

Class Brainstorm Activity

As a person dedicated to life long learning, I found an epiphany in Gardner's ideas. It helped me make sense of how I create meaning for myself in the world. It explained how people around me were making sense of their world, and this included my students. They look at their jobs and their interests/ hobbies and begin to see a pattern of meaning-making.

Pamela, B.E.S.T. staff

How do we encourage students to make connections?

Another sage guide which has influenced us significantly on our journey has been Making Connections by Geoffrey and Renate Nummella Caine. This vital book discusses educational implications of recent research about the brain. Students need to be invited to work with concepts and facts so they understand them in their own personal terms. In recognizing that adults bring experiences, interests, emotions, intentions, and developed learning styles to the classroom, we acknowledge the students as complex beings, capable of walking out of the classroom and never coming back if they find no personal significance in the work. Many of our students are now so attuned to this idea that we often hear in class this joyful statement, " Ah, I'm making connections!"

***

A student makes teddy bears as a home business—all different sizes. How can he make connections between his bear experience and his learning to use ratios and proportions?

***

Quotations from Making Connections by Geoffrey and Renate Nummella Caine, 1994. Re-printed with permission.

We must help students relate the material they need to know to what they already know. Doing so capitalizes on a natural process with which they are already equipped: the ability to learn from experience....(p. 51)

Whatever we set out to teach will be enveloped in a complex experience, irrespective of what we intend. That is because the learner's locale system is always monitoring the entire environment. Hence the challenge for a teacher is to integrate new content into that experience. Real-life experience therefore becomes the organizer for education.(p. 55)

Educators need to pay attention to all the dimensions and layers of stimuli that make up experience....the focus of education must be on the generation, by the learner, of more and more useful, sophisticated, and personally meaningful interconnections characteristic of dynamic maps.(p. 64)

To teach someone any subject adequately, the subject must be embedded in all the elements that give it meaning. People must have a way to relate to the subject in terms of what is personally important, and this means acknowledging both the emotional impact and their deeply held needs and drives (p45).

By sharing the Gardner and Caine theories with our students we are inviting them to examine how they go about solving problems at home and on the job. Strategies that serve and strategies that sabotage all enter into the equation, and students' evaluation of these factors become choices, not habits. "Intelligence" is not a finite, fixed number that controls our future anymore. Once we understand our thinking, we communicate that information to others, asking for what we need as learners and as human beings.

Some questions I've found useful in inviting students to think about their ways of learning and knowing:

- *How did you figure it out?*
- *How can you (or did you) remember it?*
- *What made you think of that way of organizing the material?*
- *Which of these methods was most useful, easiest to follow?*
- *What do you predict will be the most challenging part of this process?*
- *How do mindsets provide a barrier to your learning?*
- *How have you changed in the way you present yourself?*
- *Could you teach this?*
- *Does new knowledge change your life? How does it affect your power? Your relationships?*
- *Can you learn anything that you don't at some point take charge of and teach yourself?*

Kate , B.E.S.T. staff

What is metacognition and how can it impact communication?

Do students understand how they learn? Do they appreciate their own uniqueness? Knowledge about Gardner's theory of seven different types of intelligences and Caine and Caine's emphasis on connections reinforces in us a commitment to helping students discuss and make sense of their thinking, in essence, thinking about their thinking. This metacognitive approach to learning to learn is empowering for all learners, young and old, confident or self conscious. Often students have never stopped to reflect on their thinking and how it can impact their learning. Perhaps they have worked for a company for a sustained period of time, and never really thought about the jobs that they do.

Often times students do not have an opportunity to think about how they perceive themselves. They go about their day to day business with work and family caught in patterns which they feel they have no control over. When people begin to share the things that happen in the workplace, whether it is in a Communication and Problem Solving class or a Brush up lab, it presents an opportunity to engage the learners in some self reflection. Thinking about their thinking and talking about their thinking and feelings are really new concepts to many workers who, traditionally, have been asked to check their brains at the door. We wonder if these changes in workers have an influence on the culture of the workplace.

How do You Learn?

This is an exercise we've enjoyed doing with our students.
Directions: Circle the words or phrases that describe how you learn best.*

Other_____

*It might help to think back to a recent learning experience and determine what techniques from the list you used.

Metacognitive circle

as a visual/ auditory/ kinesthetic learner?
as an objector?
as a mediator?
as a perceiver of patterns?
as a time manager?
as a notetaker?
How do you see yourself
as a problem solver?
as an understander of graphics?
as a cooperator?
as a reflector?
as an observer?
As an asserter of beliefs?

How do our assessment processes reflect these theories?

If education is truly to be meaningful by helping students make sense of their world, it must take into consideration where the student is coming from and how s/he is making sense of his/her world. A multi-modal approach to teaching respects individual differences while ensuring that each learner's needs are being met.

The way we looked at assessment began to change as we looked at the individual learning of our students in the workplace. In our own project we have had many discussions about assessment, standardized and customized. We had looked at standardized tests to prove the successful nature of our program with our students. We had looked at customized tests that fit more closely the individual differences of each workplace, while consisting of generic components that all of our business partners had in common.

Accountability is always a driving force with assessment, yet we felt that even our customized components were not sensitive enough to the individual differences of the students and their particular job. Part of our customized assessment consisted of a feedback form in which supervisors reflected on the changes they may have observed in the frontline workers' performance. Even with this tool, the feedback we got seemed very subjective and in quite a few cases, was never turned in. In our own project we have had many discussions about assessment, standardized and customized. We are constantly asking ourselves how we can assess individual progress on an individual basis.

After I returned from the AAACE conference in the Fall of 1994, I began to process ideas from other workplace education people I had met and my experience from seven years in public schools. I began to lean toward a portfolio approach to assessment, which chronicled the students' learning. It was incredibly successful. Students really began to enjoy the five to ten minutes we spend processing after a warm up activity or an entire class activity. They began to recognize all of the connections to the jobs that they do on a daily basis and the learning that goes on in their personal lives. It helped me, as a workplace instructor and curriculum developer, to develop meaningful activities that helped them make all of those connections, explicitly and concretely.

For example, one activity I use asks students to draw, label and then present a picture of their individual work stations. After they complete the exercise we process the learning that went on. Students brainstorm a list of learning skills that were reinforced in the exercise. In this particular activity, students decided that spelling, speaking, listening, questioning, vocabulary development and visualization skills had been incorporated.

Pamela , B.E.S.T. staff

Practices

How can we help learners to learn?

Inquiry is an on-going process in our workplace education program. Since the focus of our program is learning to learn, we are reflecting and communicating often with each other and our students about the problems we need to solve and our resulting learning. Sometimes a question has come up in class, and we go back to it in order to work cooperatively together for solutions. We hope that every student walks away from that class with a new or different awareness about themselves or an issue or an action plan. Sometimes students arrive at an awareness that in some situations they really can't, given certain circumstances, do what they would like to do to solve a problem.

Learning is a process. Once students begin to realize that learning is something they can take charge of, not something that is done to them, they begin to recognize parallel processes around them. They can identify how they learn most easily, and then accommodate their learning and cognitive style to maximize their learning, whether it is in the work or classroom environment.

Because workers today are confronted with incredible amount of changes on every front, learning how to access, comprehend, retain and apply information appropriately has become a vital tool for surviving and thriving.

A student brought in this problem: a machine should have been retooled for a new size part, but stopgap measures were being used. It took us a whole class to figure out what the problem was, and the second class brainstormed possible remedies. Finally the group helped the worker to clarify a plan to go to the supervisor with a list of the alternatives the group had come up with. The supervisor then agreed there was a problem and listened to the worker's ideas.

Laura, B.E.S.T. staff

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This inquiry process began as I heard my students talking with the language of what if's. What if they had stayed in school? What if they had married someone different? What if they had worked harder in school or not frivolously wasted money when they were...? The list went on and on. My inquiry became, "If I knew then what I know now..." I began to collect these comments, these fabulous pieces of advice, on a giant piece of newsprint, which I hung on the wall.

More recently, I started several inquiries around our program. We wanted students to be a part of our study guide because everything that we do focuses on them. They have shared some pretty powerful anecdotes from time to time, and we decided to get them to put some thoughts on paper.

This process has allowed them to stop and take stock. It has been worthwhile for everyone. We get essential feedback about the effectiveness of our program, and our outside evaluator gets the sense, I hope, that the evaluation instruments that we have used to this point are inadequate in terms of evaluating the types of changes that are taking place. We get to see what areas we need to go back to and students get to articulate and validate the learning that they have done. It continually takes the stuff that we are doing in class and gives them a forum to connect it back to their real lives whether it be at work or home.

A sampling of comments:

- *Why did you join the B.E.S.T. program? "Instead of just doing one job, now I have to do five. I need to be able to read and understand my work instructions."*

- *What have you learned about communication? "Class has helped me to communicate with others and use my resources. It has helped me to realize that everyone has an opinion--right or wrong. I've learned to speak out and that's something I can take home. I communicate more...I listen more. It was hard to listen to these people before."*

- *How would you describe the culture of your workplace? "There is not enough time for training. There is a lack of communication with the people on the floor. No one really understands what they are supposed to be doing. I want to go back to the old days."*

- *What is the relationship between learning to learn, problem solving and change in your workplace?*

- *"I found that if I order my parts myself, I get them quicker. The job that I do is of higher quality because I know more about my job and can communicate problems quicker. If you learn how to do that, everything is more effective. The stress is the same, but when you communicate it you get support so it doesn't feel so stressful."*

Pamela, B.E.S.T. staff

How do we teach the problem solving process?

The majority of our workplace education students come to their classes right off the job. Because of this, often they bring with them the problem and related emotions that they are caught up in the middle of. This opportunity presents ripe challenges to assist students, as individuals and teams, to launch into a full-blown problem solving activity. This opportunity to work through a problem in a safe, supportive setting allows workers to take an active role in their work teams, participating and making a difference instead of hanging back. Their new found confidence complements their ideas and solutions because now they have a forum to be heard before taking their ideas back out onto the shop floor.

Like the problem solving process, where the problem solver defines the problem, brainstorms possible solutions to the problem, implements and evaluates solutions, the reading and writing processes follow a similar pattern. As students begin to recognize the fact that reading and writing are ongoing processes and not a static state of right or wrong, good or bad, perfect or imperfect, they begin to recognize their opportunity for growth as learners. Students actively take part in the writing and reading processes in our workplace education classroom.

***

What is a vaguely defined problem? One without a definite set of rules or procedures to follow or a definite goal. For example:

How would you go about setting up a lunchtimevideo program at your workplace?

How could you convince management to send your department to a new training course?

What kinds of general procedures can help structure these kinds of problems?

***

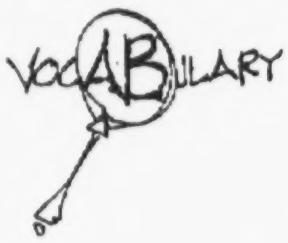
Our needs survey told us that a construction firm's employees had a very strong interest in applied math for construction. To provide maximum flexibility and meet a range of learning styles and math abilities we decided to deliver the same content in two different formats. The first format was a series of fast paced individual workshops on the list of topics identified by the employee planning team. The second format was an individualized self-paced class. The first night of the workshop, I had a student at each extreme. One quickly caught on to the presentation and asked questions and contributed ideas. The other nodded his head and when asked if he understood said yes. I was doubtful, so I went and sat next to him. I saw he was not using the approach (unit conversion ratios) that I was teaching. When I pointed this out, he said defensively, "You don't have to use the same method as long as you get the right answer." I agreed and asked him to show me his method. His method was only partially correct and from continued observation I saw that he made calculations without judging the reasonableness of his answer.

I found I could not teach him my procedures; instead, I guided him in refining his own procedures. No matter how incorrect his approach, I had to observe it and ask him to explain it until I could identify those elements of the method or concept he correctly understood and affirm them. Then I explained what was wrong with his incorrect elements and showed him workable approaches. After class, I talked with him and urged him to consider the self-paced class because in that class he could learn his way and not be frustrated. He commented that he was always frustrated at learning and asserted that it was his choice whether to continue to come to my class or attend the other class. I agreed and said he would always be welcome in my workshop, but for his own success in learning I recomended he try the other very small self-paced class. We left it at that. I was pleasantly surprised the following week when he attended the self-paced class.

Judith, B.E.S.T. staff

How do we teach the writing and reading process, with and without workplace materials?

When students need to work on a piece of reading or writing they brainstorm all that they know about the specific subject. During the pre-reading part of the reading process, students explore the entire piece of reading before they actually begin the task at hand of reading. They read the title and subtitles, they look at the graphic organizers (charts, pictures or diagrams), they scan for unfamiliar vocabulary,



and they raise questions they have about the text based on the information they have gleaned from the previous steps. Then they read the text trying to visualize the material as they go. If they are reading a set of work instructions, they should actually picture in their mind's eye themselves completing each step of the process. By using the visually strong right hemisphere of the brain, they are increasing their chances of comprehending and retaining the information. When they have finished they return to the questions they posed during the pre-reading part of the process, and respond to them according to their learning style.

The writing process advances in much the same fashion. Once students have brainstormed all the pertinent details about the particular writing assignment, they can then work on putting those details in to complete sentences. Often sentences fall into place from there, but writers can elect to share their rough drafts with their fellow classmates for feedback. Once the student writer has received feedback, he can make changes, editing into a final draft. The class itself serves as a team to enhance the writer/readers learning process. Because each class member represents a different approach to a learning problem, whether it be a reading, writing or communication problem from the workplace, every student has the opportunity to benefit from the experiences and diverse processes of the others.

How Does Computer Instruction Help Students learn Contents?

One of our consultants, Mike Hillinger, the creator of Lexlcon responsive texts for computer use, has developed "Responsive Text" programs to teach blood borne pathogens, Total Quality Management, and HazComm (among others) for our students and teachers to use. Responsive Text is an interactive computer program format that shifts some of the burden of "making sense" of the text for the reader to the material itself at the reader's request by speaking words, defining words, presenting background information, and guiding the reader in monitoring comprehension. It can be used to enable readers who range from poor to proficient to improve their reading skills while studying the workplace content. The programs are designed to encourage students to choose options in which to learn more information, to take self-correcting quizzes, and have words pronounced and defined, but the computer programs are not used alone. Teachers encourage class discussion and other activities to help students make meaning of the material, connecting it to their lives.

How does the workplace instructor handle the diverse needs in her classroom?

Just like the public school, the workplace education classroom contains many students with immensely different needs, strengths and weaknesses. English as a Second Language (ESL) students often find themselves in regular classrooms with students who are learning disabled or other students who might just want to brush up on reading, writing, math or computer skills, and we wouldn't have it any other way. In our program, we have had the luxury of working with consultants who have had the expertise to assist us in accommodating instruction to the individual needs of all of our students. By bringing all of these learners together in to a heterogeneously mixed group, students learn to appreciate the diversity in learning styles. The students' strengths and weaknesses complement each other well, and often times they work together. This can in fact be tricky if there is a huge chasm amongst the skills of the individuals; if some students feel that they are impeding the progress or speed of the class, their self esteem will be negatively impacted. We often begin class with a warm up exercise that we go through as a group, and then students break up into smaller groups or as individuals to start working on their independent goals. Depending on their individual skills, goals and learning styles, some students are more comfortable working on their own, while the instructor can spend more time with the students who need more intense instruction, moving fairly regularly amongst all students.

We realize that some differences in learning styles and approaches are cultural. Some students have a strong tradition of authority, and they may consider it disrespectful for students to ask questions when the teacher is talking or even to question what the teacher says.

Should the communication process be taught to all students?

As I have experienced a great variety of workplace settings I believe that most all employees could benefit from a class on communications. I can foresee the probability of offering the communication process to whole departments in some of the businesses we work with.

Laura , B.E.S.T. staff

Examples of Warm-up Exercises

Exercise: Objectives/Skills/Learning

1- Reading an article about employee benefits: Reading process, vocabulary development, document analysis.

2- Writing a letter to supervisor: Writing Process, letter writing, problem solving, creative thinking, utilizing resources.

3- Draw, label and present your work station: visualizing in mind's eye, spelling, vocabulary development, speaking, listening.

4- Outline your work process: listening, speaking, reasoning, sequencing, choosing the appropriate mathematical processes.

5- Letter editing exercise: verb agreement, punctuation, spelling, paragraph structure, speaking, sentence structure.

6- Work Problem Solve: creative thinking, decision making, problem solving, seeing things in the mind's eye, knowing how to learn, reasoning, self esteem, responsibility, sociability, self management, integrity. (Some of the problems require reading, writing, mathematical and communication skills in order to solve them.)

7- Cooperation puzzle: communication skills (can they solve the problem), integrity (will they follow the rules), sociability (will they work together), self esteem (does the student believe that her information is valuable to the solution), self-management and responsibility (will the student persevere until the end), mathematical (coming to solution), reasoning (solution), creative thinking (making connections between the pieces of the puzzle)

8- Crossword puzzle: writing (spelling), problem solving (word sounds) and decision making, reasoning, communication, seeing things in your mind's eye (what words fit into the puzzle), vocabulary development, reading clues.

9- "Math Shop" computer program: mathematical processes, reading questions, typing (writing) answers correctly, communicating ideas about correct answers, problem solving ways to go about solving problem.

Pamela , B.E.S.T. staff

When I have worked with some students I have had to question, at first, if they couldn't understand what I was saying in English, or if they were conditioned not to speak out in class or ask questions but rather to nod their heads politely. I eventually found in most cases that they did understand the questions I was asking them in English; they just weren't accustomed to being asked questions by a teacher in this manner.

One student was very apprehensive about attending an ESL class although I sensed that she definitely wanted to understand and speak English more effectively, but something was keeping her from getting more help. I asked her why she didn't want to participate. She said, "I do, but I have to check with my husband first." I realized, then, that much of her apprehension was cultural specific. It is likely that in her culture woman do not make such decisions with out permission from their husbands.

Many ESL students from this same company were apprehensive about the classes. One way to make them feel more comfortable was to offer the classes at the work site. Also, we have been using one ESL worker from the Worker Education Committee to act as a spokesperson and motivater to get the ESL students excited about taking classes.

Judy , B.E.S.T. staff

What are the SCANS Skills? How can they be incorporated and assessed in workplace education classes?

The well-being of American business in this competitive global economy depends on the well-being of the educated employed. This interdependent relationship is becoming more and more formalized as time goes on. Schools and businesses have begun to talk about the different skills graduating students need to have in order to succeed (attain and retain a job) in the business world. This interaction precipitated the SCANS (The Secretary's Commission on Achieving Necessary Skills) report. In 1990 the Secretary of Labor brought together representatives from education, business, labor and government. The Commission spent a full year interviewing people in every different type of job from every level and recorded the skills and competencies these people needed to do their job successfully. Their final report, Learning a Living: A Blueprint for High Performance, highlighted three areas of foundation skills and five areas of professional competencies.

The three foundation skills are basic skills, thinking skills, and personal qualities. Basic skills include reading, writing, arithmetic/mathematics, listening and speaking. Thinking skills include creative thinking, decision making, problem solving, seeing things in the mind's eye, knowing how to learn, and reasoning. Personal qualities include things like responsibility, self esteem, sociability, self-management and integrity/honesty (Learning a Living p.16).

The five competencies address the areas of interpersonal skills, information systems, technology and resource-management skills. Interpersonal skills include: participating as a member of a team, teaching others new skills, serving clients/customers, exercising leadership, negotiating, and working with diversity. Information management includes: acquiring and evaluating information, organizing and maintaining

information, interpreting and communicating information, and using computers to process information. System management includes: understanding systems, monitoring and correcting performance, and improving and designing systems. Technology skills include: selecting technology, applying technologies to the task and maintaining and troubleshooting equipment. Skills involving time, money, material and facilities, and human resources management, fall under the general resource competency. This general area addresses the identification, organization, planning and allocation of resources in all of those sub areas mentioned above (Learning a Living, p.12).

The SCANS foundation skills and competency lexicon is an importance reference point for us. That is not to say that we teach the SCANS skills and competencies in isolation; we don't. I begin each of my brush up classes with a warm up. These activities vary in terms of content and process, but they introduce and reinforce many of the SCANS material in an integrated manner. Each of my brush up students has different personal and professional goals. Some of them are working on improving their reading comprehension, some of them are trying to improve their spelling or writing in general, a number of them are working toward taking their GED, and some of them are trying to get a handle on specific math skills. One day we could fill out a crossword puzzle that focuses on word families or homophones and in the next class we could be completing a cooperation puzzle. Whatever we do, it is a collaborative process that culminates with students reflecting on their learning content and process. This encourages students to communicate with each other and actually put down into writing what learning has just gone on. We talk about our own learning styles, so students are empowered to utilize their strengths and strengthen their weaker areas, when confronted with a problem, learning situations in disguise on a daily basis. Since every student is introduced to the reading, writing and problem solving process, s/he has a very concrete process to use when approaching any of those types of tasks.

Pamela, B.E.S.T. staff

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The Business Culture

What is helpful to know about the organization?

What is its mission or vision?

In a highly charged, ever-changing business climate, workplace education is often brought into a corporation to close the skills gap. What we have found in our program is that we are often able to help students work on the things they need to have in order to be able to succeed in the jobs that they are being asked to do everyday. In some cases the problem solving that goes on as an everyday effect of class participation actually serves as a catalyst itself. Students can come into class with a problem, and we look at it. We look at the corporate mission and values statement and compare and contrast it against the observed/experienced problem. If there seems to be a mismatch, we brainstorm solutions to that problem that would be more congruent with the organizational mission or the direction the corporation is taking.

What are the underlying values of that mission?

Many of the problems that find their way into our classroom are brought about by those discrepancies that our students perceive between the mission of the corporation and the realities of the system and its processes. Sometimes they don't perceive the processes or various systems as incorporating the organizational mission and values. For example students have spoken about how frustrated they feel when they are asked by their supervisors to undertake a procedure that has been deemed as unsafe. In a corporate culture that talks extensively about worker empowerment, contradictions like these trouble students, negatively impacting morale.

Written rules, policies and procedures often are the communicated guidelines from which students are supposed to take their cues. Sometimes students even find themselves in a position where the written policy is ignored on several levels, and the preferred mode of practice is the exact opposite. Consistency and communication are the answer because the pressure of reconciling the two inconsistencies can be devastating and overwhelming for workers, especially in a corporate environment where informal communication systems enforce the accepted norms rather than those of the formal.

As B.E.S.T. workplace instructors, we come from an outside organization into another company. Sometimes when we have helped students brainstorm solutions to their problems, students have given a huge sigh at the end of the brainstorming process and said, "You just can't imagine what it is like. These solutions sound good, but you don't know what it is like in there." The organizational culture and climate impact everything that goes on in a workplace education classroom.

Even though the company has incorporated a workplace education program, students sometimes continue to not trust the company and its management representatives. In a climate where downsizing is a way of life, students' fears run deeply. Are employees trusted, as people or professionals? Are their opinions sought? Are they allowed to try new things? Does the organization invest in other types of training? What kind of reward systems are used-- individual, team, seniority, none at all, cash bonuses for performance or skill based incentives? Do students feel as though they are valued or contribute value? Do students know how to interact within the existing systems to address concerns and issues? What kind of relationship exists between labor and management?

Communication and Problem Solving: Case in point.

A perfect example that illustrates nicely how cognizant our students are of the communication process in what can be a corporate political structure involves one of our B.E.S.T. students. This student had really started to speak up about unsafe working procedures since she had become involved in the B.E.S.T. program. As she uncovered her "voice" that had been quiet for so long though, she found herself feeling very uncomfortable and angry about some of these situations. On a few occasions when she felt the need to speak up to one group or another, she found that she got herself in trouble. Along with this new voice and the responsibility she felt to speak up about the things she was seeing, was a realization that her words had very different effects on a number of people. A very real consequence of her decision to step forward and confront unfair situations was that she was "punished" by her immediate supervisor. Repeatedly after coming forward, she was assigned to the very dirtiest, most horrible jobs in the department even though her performance was the best. She began to feel that speaking up meant retribution, and she found herself caught in the middle. She wanted to speak up and problem-solve through some difficult situations that she thought were keeping her team from being as efficient as it could be, but she knew what the repercussions would be.

The solution came one day when she found herself at a round table discussion with top management and other employee representatives. They were asking for feedback about certain issues, and our student once again felt the need to voice her opinion. Summoning all of her courage and information from her work in Effective Interpersonal Communication and Problem Solving, she cautiously ventured into the discussion by saying, "I have some ideas about how to solve that problem. I would like to share them with you if now is the right time. When I have brought up ideas or problems like this in the past, I have ended up spending the rest of that week cleaning. Is this the best time to talk about this?" In the ensuing discussion, management thanked her for her input and immediately went about solving the problem.

Pamela, B.E.S.T. staff

Are employees fearful of workplace education?

Despite efforts of the Employee Education Committee, the one-to-one interview process, management cooperation, and invitations to workers to help design their programs, there are many employees who do not become involved.

Many employees look back on their own school experiences with distaste. The idea of having more school on the job, for many, is unappealing. When employees say, "I hated school, and I don't want anymore of it!" We suggest this kind of response: "I can understand how you felt about school. But what's important to us in B.E.S.T. and to me as a teacher is that it's not like school. How would you want your learning experience with us to be different from your experiences at school?"During the initial interview we try to allay fears and also give the worker time and space so that they get information and an invitation without pressure to attend.

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A case scenario of how sensitive the interviewer needs to be, was when a worker said to me, after I asked her if she would be interested in participating in any of the B.E.S.T. workshops or Brush-up Labs, "I have an attitude about education and I can tell you right now, I probably won't participate." Well, when someone feels so strongly about how her previous education and teachers affected her, it is quite a challenge to encourage her to trust what the B.E.S.T. program promises: to meet the needs that workers have in a friendly, informal environment without using grades or tests, and ensures confidentiality between instructor and learner. What touched me the most was that this young woman is a mother and when she told me that she could barely help her child with her school work, I saw tears well up in her eyes.

I told her I completely understood. At this point, I emphasized that by participating in the workshops or in a Brush-up lab, not only will her confidence be enhanced at work, but also in helping her child with school work. She listened, thought about it, and at last said, "I have to do this, I want to feel more confident at work and I don't want my little girl to struggle like I have."

The interview with this women was only supposed to be 5-7 minutes, but we ended up talking at length, and in order to reach out to her, and hear her fears and apprehension concerning education, I felt this was necessary. I strongly believe that she will participate now.

Judy, B.E.S.T. staff

One of our consultants, Robert T. McLaughlin, of the Vermont Workplace Education Program, offers these thoughts: "...employees in fact have two major reasons for eschewing educational opportunities in the workplace. First, employees have work-related fears about pursuing educational offerings and benefits. Many employees will wonder, will my employer find out I can't read? Will the firm downsize and lay people off on the basis of their relative skill levels? Will my subordinates discover I have lower skills than they? Will I now not get that job on first shift because they realize my writing skills aren't what they otherwise would assume? As if these fears weren't daunting enough, there is a second, even more profound disincentive for many employees, related to their past educational experiences. Many ask themselves, what if I can't handle the homework? Will there be quizzes and tests and other competitive pressure? (Remember how we all used to ask, when the paper were handed back to us, 'Whatcha get? Whatcha get?') Will I be made to feel stupid and inadequate as I did the last time I was in a classroom? Why should I be likely to do well now when I did so poorly the last time I was in school? Who needs this kind of stress anyhow when I've got all I can handle?"

Some employees overcome their fears and attend brush-up classes, which offer individualized help and support from teachers who create opportunities for success. The students' skill levels are kept confidential. Beginning with the Need and Demand Survey, teachers reassure students that B.E.S.T.'s programs respect students' strengths, background knowledge and experience.

As I was working with a student who has difficulty reading and writing, I said, "Do you know that you have the ability to write well? It seems to be locked up inside of you. We are going to find the key. You are smart."

His response was, "I have to be smart in order to keep fooling people so they won't know I can't read well."

I use teachable moments. I asked a student if he had attended the Books and People Conference sponsored by Adult Basic Education. He said, "No, but I wish I had. I was lost in the woods." As he told me the story, I took notes. Then he was able to type it on the computer. It was sent to the Eagle (statewide student newspaper) and published. This was a wonderful learning experience for him. It was exciting to watch him put his thoughts together.

Then I had a student who stated, "I am the world's worst speller." As we worked together, it became obvious this was not true. After spending one hour a week for four to five months, he gained a lot of self confidence and was able to recognize his errors. His writing skills also improved. He was able to see his gains, and he felt much better about his spelling and writing abilities.

Another student entered the program without being able to write a complete sentence. He is making great gains now. He can go to the computer and write a paragraph. He used to tell me the facts, and I would write them down. Then he would rewrite the sentences. Now he can do the whole process by himself.

Dorothy, B.E.S.T. staff

Is one of our goals to empower workers?

If so, are they going to be penalized for being empowered? For being assertive? From our perspective we **should** be empowering workers, however we are not convinced that supervisory personnel always agree. We continue to hear stories about employees being penalized for speaking up and trying to effect change. It is not unusual to hear that students are reluctant to confront those with whom they work or that when they do use the skills they have learned, their efforts appear unsuccessful. A supervisor who does nothing or simply shifts the worker to another workgroup increases an employee's feelings of powerlessness.

Certainly, employees must learn to accept some responsibility for their actions and not blame the employer for everything that occurs. However, as long as employees are encouraged to respond with helplessness, true empowerment--the feeling of mastery and mattering--cannot exist.

Is there joy in workplace learning?

"I started the B.E.S.T. program in October of 1993 with a poor attitude of myself. I told the teacher that I could only read on a sixth grade level. I found this to be false. I am now in my second semester at Community College of Vermont and checking into a third. I have at this time an A average."

"I'm coming back! I may even come back on my day off to do this!" (a computer discoverer)

"...one of the more enjoyable classes that I have ever taken."

"I feel more willing to put more time and effort at work because they have allowed me time to take these courses"

"Anyone who participated in this classes has more self esteem and pride."

"In fact the only bad thing about the class is when it ends."

"This has made me want to learn again!" (student in self confidence study group)

What problems do we encounter in the organizational context?

The more completly we understand the organization, the more effective we will be in working with students. As workplace instructors we will be able to anticipate problems in the workplace, or in the planning and implementation of a workplace education program and engage our students in the problem solving process. We were confronted by many such problems in the planning and implementation process.

Basic skills stigma

When individual employees at General Electric began flunking open book training tests, it became evident something needed to be done. The Training Department contacted Adult Basic Education to see what could be done for these workers and the B.E.S.T. program was born. We began offering brush up classes to help students improve their reading, writing and /or math skills. People began to perceive our program as only a basic skills program, which kept some workers from walking through our doors. But other needs soon began to became apparent. We began offering workshops and classes in subject areas important to workers no matter what their academic level, such as communications and problem-solving, and we also began teaching some higher-level courses. Still, some of our participants are still taunted by fellow employees: "What's the matter, didn't you ever learn how to read?" and similar comments. Even students working on very sophisticated projects are taunted by others who do not value life-long learning or understand how diverse the offerings are. This creates a marketing chanllenge

Pressure of Staff Development

As we continued to work with the various worksites new topics for workshops and classes emerged. As we found ourselves constantly learning and growing in our program. This has been an exciting process. However, because we have developed our own curricula in response to student needs and contributions, teachers have done a substantial amount of research and learning before they have even felt comfortable developing curriculum in any area. This can be an exhausting, time-consuming process.

Saturation of interest

We started our program offering certain classes and programs designed to meet the needs we were aware of at the beginning. As those needs evolved and others were articulated, we have expanded the scope of our program. Sometimes though we find that specific workshops, after being offered several times, no longer run because of low enrollments. When we have encountered this problem, it has caused us to re-examine our marketing and need assessment processes.

Shifts

Teaching at a worksite that runs on all three shifts provides some interesting challenges. First of all, instructor's need to try to accommodate the students' schedules. The fewer the teachers, the trickier it becomes to cover all those different times and meet the needs of the students, especially if the students attend class on release time.

Another challenge is to accommodate the needs of the student's work area. Different departments do various things at different times. Sometimes a class at the beginning of the shift is better for one department because that tends to be their slow time, while other departments don't slow down until the end of the day and the change of the shifts. By holding we have sometimes open labs at the shift change, we have been

able to accommodate all of these needs.

When companies cross train this can become even more complex. It becames awkward for them to attend a regular class, which is especially tough because, often when they are in a cross-training situation, they need the support of their B.E.S.T. class more than ever. sometimes we were able to accommodate these students in a smaller or one-on-one tutorial, but more often than not, they elect not to come to class because of the conflicting pressures of job. This can happen even in the day-to-day life of a department.

> *People get stressed up a lot. Cross training requires more reading. It always requires testing, and questions are written down. And there's always a book to read. It used to be you had to know one job. Now you have to know a lot of jobs. I know how I feel when I don't understand. And if you go to a book and you can't read well, it's scary. Older folks are scared. I've trained people, and I can feel how they feel. They're afraid they're not going to go fast enough. Some people are embarrassed to come to classes, and a lot of people don't want to learn anything new. When you go to classes, you get smart remarks from other people. And some say, "I'm too old to learn anything new."*
>
> *G.E. student*

Hours

There are two major issues that fall under hours. First of all we have had many discussions about how long our workshop and classes should be we are often caught between wanting to make sure there is enough time for students to practice the ideas and content presented, while at the same time giving instructors enough time to present the information without jeopardizing the integrity. We finally settled on four-hour workshops because that seemed like a long enough period of time to both introduce important concepts about the topics and allow for a little practice. Some instructors have elected to prolong a workshop when there was a need for more time.

The second issue around time has to do with the best times for our classes to meet. This can be a tricky piece to negotiate with the group and their various departments and requires clear and constant communication. We have had some situations where students are coming to class from a very busy area during a very busy time. It is sometimes hard for students and their supervisors to weigh the long term and short term effects of student participation.

Support

Even though we do have the support of our business partners' training/education and human resources departments, there are some individuals in organizations who don't support our programs. Some front line managers have discouraged some of their workers' participation in the program. Some of these managers feel that various workers were becoming perpetual students to get out of work. Other supervisors began to notice that certain workshop topics would empty their whole department. For example, once when a stress management workshop was offered, eight people of a twelve person team signed up. As a result, one of our cooperating business partners set a policy that only two people from each work team could register for B.E.S.T. classes at the same time, unless approved by the team manager.. This provided us an opportunity to get entire work groups involved in a workshop.

How do we coordinate the workplace education program with the existing training department efforts?

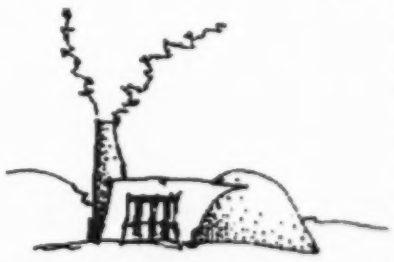
The key to a workplace education program's success ultimately connects to how closely the program can assist the corporation in providing quality educational programs, whether those are focused on basic or technical skills. Understanding this organizational context allows our students and ourselves to see the big picture. Many of us, regardless of the organizational context, get caught up in the day to day details and dramas of our particular department or team, losing sight of the fact that the corporate well-being inevitably rests on efficiency and effectiveness of the front line workers who implement the corporate policies and procedures.

Once students, management and instructors in the workplace anticipate the problems that may arise, they can deal with them. By brainstorming possible solutions or strategies for addressing those problems, the participants, management or the employee education committee can weigh the pros and cons of each of the strategies and then implement them. Each workplace has a different organizational structure, and the problem solving process falls out a little bit differently in each bussiness. Representatives from each part of the organizational structure need to be partners in the program implementation process. Management's questions about their workplace education program (who they are, where they come from philosophically as well as experientially, what their credentials are, etc.) must be adressed. Laying the foundation is an important step of implementing a workplace education program because without people from each area buying in to the philosophy and developing the processes with the workplace educators, the program cannot succeed.

The more knowledgeable the workplace education providers are about their business partners, the more effective they will be in working with students around issues they are experiencing in their work environments. The rule also applies to the students from each area. The more they know about the work that goes on in other departments, the more they understand their jobs in that larger corporate context. The more they understand what they need to do, the more likely they are to be able to articulate their needs. In our workplace education program, these needs have directly been translated into curricula. When students have been asked to work as a team, they begin to recognize the need for more training, especially in the area of interpersonal communication and problem solving.

How can the workplace support a culture of learning?

A workplace that is embracing change, whether it is in the technology that is being used or the restructuring of the entire organization, must support a culture of learning to make that change successful.



When everyone in an organization, from the chief executive officer to the front line worker, is learning and growing, personally and professionally, learning becomes a safe and supported enterprise.
Many of our cooperating businesses already have in-house training programs. In many cases our program, classes and workshops dovetail with their training needs, and in general, the B.E.S.T. program supports

their training by helping students increase their feelings of self-efficacy, their understanding of how they learn best, and their skills of problem solving. We have worked together with the in-house programs on curriculum development, and in the case of our supervisor communication class, we have even collaborated on a resource library since the company wanted resources they could follow up with after their official workshop was over.

We expanded the initial scope of our basic skills program to include a wide variety of specialized workshop topics. From there we hope to encourage educational explorations that are not directly conected to work. On our initial survey, all sorts of topics came up with interests ranging from fly fishing and boater safety courses to SCUBA classes. We cannot teach those subjects, but we can bring them to the attention of the Employee Education Committee and to the education/training departments for their attention, and we can be a source for referrals to other programs. By reaching out to everyone, no matter what his/her area of interest, we can make learning relevant and appealing. Hopefully, our efforts will help people recognize other areas of personal and professional development. As their feelings of self esteem and self efficacy increase, they will value their educational opportunities and support one another in their pursuits.

Because our business partners have been supporting a culture of learning, the businesses will probably continue to look at their current training programs to determine what gaps remain. The B.E.S.T. program has been helping to fill many of those gaps, and we hope we will be able to continue to do so as educational partners even after federal funding ends.

Concluding Thoughts

This study guide has been a long time in coming in many different ways. We have spent hours researching current adult education practices in teaching and curriculum development, countless hours applying what we have researched to our classrooms in various workplaces and finally sharing, reflecting on the outcomes. What you see before you is its product. We offer this, not as a prescriptive model for all workplace education programs, but simply as a record of where we have been. We hope that the questions we have posed for you will prepare you for obstacles which might impede the progress of your journey. Often the solution will not lie in fixed answers for those questions, problems or obstacles, but the willingness to grapple with them. Our path is ever evolving.

We have had some spectacular guides along our journey, and we have included them in the annotated bibliography. Most of our discoveries are not earth shattering or original, but they just come from sound educational practices. Our vision has been forged from a number of influences, but the key component is student centered learning. We believe that by inviting students to explore their world of work in a safe environment that tries to enrich every participants' self esteem, workers can grow personally and professionally. We believe that by inviting students to reflect on their own thinking processes, they can unlock to door to life long learning and take control of their future.

Annotated Bibliography

Selected Works In Workplace Literacy

Aderman, B., Askov, N., Hemmelstein, N., Upgrading Basic Skills for the Workplace, Appalachian Regional Commission, 1989.
This publication offers a thorough resource that defines and relates the history of workplace literacy. Occupation-focused instruction and sample activities for the work-related curriculum are included as well.

Adult Literacy in America, a First Look at the Results of the National Adult Literacy Survey, Educational Testing Service, September 1993
This is the first volume in a series describing the results of the survey of 1992 ordered by Congress. While subsequent volumes, including one on literacy in the work force, report more specifically, this volume gives an overview and explains the general research design which investigated prose, documentary, and quantitative literacy among adults. The study recognized literacy as the process of "using printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential." (p. 2) The volume includes samples of questions by level, summary of findings, and how they relate to social and economic characteristics of the population.

Armstrong, Thomas, Multiple Intelligences in the Classroom, Alexandria, Virginia, Association for Supervision and Curriculum Development, 1994.
Howard Gardner, from the Harvard-based Project Zero program, fashioned a model of looking and thinking about intelligence that respects individual differences in how people make sense of their world. Gardner classified intelligence into 7 main categories although he contended that a case could be made for many, many more. This book discusses Gardner's intelligences: linguistic, spatial, body-kinesthetic, mathematical, interpersonal, intrapersonal, and musical. Armstrong applies these to classroom practices. Topics include explorations into curriculum development, classroom management, assessment, and special education.

Barth, Roland, Improving Schools From Within, San Francisco, Josse-Bass Publishers, 1990.
Roland Barth, a teacher and principal in the public school system for fifteen years before going to Harvard, reflects on his experiences, summarizing why so much about the educational system feels negative when it could be so positive. Developing relationships/communities of learners as colleagues, leaders, and learners is at the core of Barth's suggested solutions to the problems he sees.

Brooks, Jacqueline Grennon and Martin G. Brooks, In Search of Understanding: The Case for Constructivist Classrooms, Alexandria, Virginia, Association for Supervision and Curriculum Development, 1993.
The authors make their case for constructivism: the practice of structuring learning environments so that students can engage themselves in making meaning out of their world. Through this process, they recognize the ambiguities inherent in the world and take responsibility for reflecting on what they find and how they discovered it. Brooks

and Brooks invite educators to change their way of looking at education as teacher-centered to a student-centered adventure.

Caine, Geoffrey and Caine, Renata Nummella. Making Connections: Teaching and the Human Brain, Menlo Park., CA., Addison-Wesley, 1994.
Caine and Caine use the most recent research about the brain to present their case that a brain-based learning approach is needed in today's schools. They contend that much traditional teaching actually works against the brain's natural predisposition to learn. Practices of rote memorization and teacher-centered learning are not complementary to the physical make-up and chemical interactions present in the brain.

Des Dixon, R.G., "Future Schools", Phi Delta Kappan, January, 1994, pp. 361-365.
Des Dixon suggests that we are so busy placing bandaids on the major woes in education that we are not making time for ourselves to construct the major renovations that we need to in order to truly fix education. According to the author, much of what is wrong has to do witih the faulty lens through which we look at students. We think of them as helpless, apathetic, passive people when in reality many of them have already taken on adult roles and/or habits to deal with their often chaotic lives.

Gowen, Sheryl Greenwood. The Politics of Workplace Literacy, A Case Study. Teachers College Press, Columbia University, New York.
This is a case study of conflicting motivations and perceptions of worker need at a workplace education program in a Southern hospital. Management believes the low-level employees need literacy instruction to change them into "workers who are silent, obedient, and easily controlled...." (p. 31) Low-level employees enrolled in a study program reveal resistance at work borne of their perception of the hospital work setting as patriarchal and hierarchical, (a recent legislative act has even exempted the hospital from liability for employee accident at work) reminiscent of the plantation work-setting, the resistance being perceived by management not as such but as stupidity and incompetence. Students feel that they know their work, and they want to learn new things. They want credentials (GED) and job advancement, not increased competency in jobs they already feel they do well. But the grant is for functional context learning to improve worker skills. The study points to the grant administrators' need to pursue the grant objectives even when they are not congruous with the students' objectives and also discovers and describes a difference in employee preference for relational rather than linear-task approach to work.

Haigler, Karl O. and Sondra G. Stein, Workplace Literacy Training in Modernizing Manufacturing Environments, National Governors' Association, 444 North Capitol Street, Washington, d. C. 20001-1572, 1992.
This article describes the results of workplace education in four companies motivated by economic survival to improve product quality. Delta Wire, for example, shifted from an emphasis on quantity to quality, meaning that workers now would have to be responsible for quality right at their work site and needed to learn new skills in order to handle statistical process control. Authors discusses implications for workplace education based on these case studies, explain the Malcolm Baldridge National Quality Award criteria which help define the high performance workplace, and include a chart contrasting the traditional and the high-performance organizations.

Harris, Marvin, Why Nothing Works, New York, Touchstone Book, Sismon & Schuster, Inc., 1987.
Harris, an anthropologist, offers an explanation for the confounding changes that have affected people's quality of life, tracing the interrelationships among recent societal changes. He charges modern mega-businesses with

seeking profits through an "orgy" of mergers and acquisitions while placing less emphasis on quality of goods and services. He offers description rather than prescription.

Hawkins, Mary Louise and Graham, M. Dolores, Curriculum Architecture: Creating a Place of Our Own, Columbus, Ohio, National Middle School Association, 1994.
Curriculum development, implementation and evaluation are hot topics these days. The authors highlight why the need to rethink curriculum is an ongoing process. Curriculum architecture must reflect the specific needs of the community it represents, while engaging all those members who have a vested interest in its process and outcome. Hawkins and Graham, like Brooks and Brooks, ask us to reexamine, reconstruct, and reflect on how we define curriculum and education as we prepare our students for the world and confront the changing nature of life as we know it.

Learning a Living: A Blueprint for High Performance. A SCANS report for America 2000. Executive Summary, U.S. Department of Labor, 1991.
This pamphlet identifies workplace competencies and foundation skills which authors recommend be explicitly taught at all levels of school and incorporated by businesses into their resource developement. It suggests assessments should be given students and workers to provide a resume documenting attainment of SCANS competencies and skills. Compares a conventional classroom and a SCANS classroom. Included is a hypothetical SCANS-based resume.

Leu, Donald J., and Kinzer, Charles J., Effective Reading Instruction, 3rd edition, Englewood Cliffs, Prentice-Hall, 1995.

Massachusetts Department of Education, Math in the Workplace, The Commonwealth of Massachusetts, September, 1993.
This report covers four primary avenues for attending to math in the workplace: the current state of art in workplace math, experience in the workplace, workplace math resources, and a training plan presented at a mini-course. Math skills for the workplace are emphasized along with strategies to teach and facilitate the learning of them. Examples are given as to why these math skills are necessary for meeting job and life demands. A training plan is included, offering goals, objectives, and strategies for teaching different math applications, acknowledging that there are many ways to reach a given answer and that there may not be only one answer to a given problem.

U. S. Department of Education, Workplace Literacy: Reshaping the American Workforce, Office of Vocational and Adult Education, May 1992.
This pamphlet describes the history of the National Workplace Literacy Program administered by the Department of Education and includes an overview of the goals and objectives for workplace literacy programs. It offers examples of best-practice programs, graphs illustrating the distribution and growth of the programs, and suggestions to help workplace program applicants. The appendix includes a list of programs funded as of 1992 and a list of organizational and literary references.

U. S. Department of Labor, Teaching the SCANS Competencies, 1993.
This presents an integrated curriculum for different projects and foundations supporting innovative approaches to teaching the basic skills areas in relation to the real world One section is devoted to the importance of, management of, use of, and effectiveness of technology. Another section speaks directly about preparing limited-

English students for the workplace, and the importance of teaching culture as well as language. Assessment of the SCANS competencies describes a variety of assessment techniques.

Westheimer, Joel and Joseph Kahne, "Building School Communities: An Experience-Based Model," Phi Delta Kappan, December, 1993, pp. 324-328.
This constructivist-based experiential model advocates the building of communities of learners for support. The curriculum and its resulting activities incorporate skills and knowledge into an interdisciplinary project based on student and their interests. It stresses collaboration rather than competition in order to build motivation and understanding.

Workbooks:

Document Skills for Life and Work, ETS Applied Skills Series, Educational Testing Service, Princeton, New Jersey, 1992
Practical, clearly displayed documents, good variety, for key word and scanning practice, helpful for ESL students and for range of document studies, from simple single matches to multiple matches to integrating information. No math. Just reading and thinking. One question per page with ample explanations on the next. Materials could be used for teacher- and student-created questions.

Number Skills for Life and Work, ETS Applied Skills Series, Educational Testing Service, Princeton, New Jersey, 1992
Reading charts, graphs, and tables and doing some arithmetic. Broad variety of very useful documents.Provides practice in key word and scanning, document-reading strategies, and practical arithmetic. Would need to supplement some of the decimal and percent work with more explanation and practice for some students; would in general prefer to see the process of finding what percent one number is of another begin with the creation of a fraction, which this book doesn't do. As with the Document Skills book, the documents in this book provide excellent raw material for generating other problems to solve.

Reading Skills for Life and Work, ETS Applied Skills Series, Educational Testing Service, Princeton,New Jersey, 1992
A workbook of learning and practice exercises to work on finding, using, and creating information. Explains skimming and scanning and studying. Material of adult interest, clearly written, with much white space and very few questions per page with ample explanations of answers. Goes from fairly simple to mid-level difficulty.